A study of impact of Business analytics on organizational growth with reference to Pune based organizations

Prof. Pallavi Deshpande

Assistant Professor, Amity Global Business School Pune, Amity University.

pdeshpande@pun.amity.edu

Phone no. 9850957120

Abstract

Business analytics (BA) is process in which business data at all levels and from all the functional units of a businesses is collected, cleaned, processed and stored and then, by using statistical models and iterative methodologies it is transformed into business insights. Organization who are committed to make data driven decisions follow this kind of practice. Researcher has carried out a survey with an intention to know that which all industries have started using business analytics in Pune, awareness of managers towards business analytics practices , extent of data driven decision making approach of organizations, and what is the impact of usage of business analytics on the overall growth of an organization.

Survey was carried out on managers who are at tactic and strategic level in the organization. CIO, CTO, VP, Senior managers were the respondents selected considering that these are the people who are required to take day to day and strategic decisions for their organizations. Questionnaire was prepared and circulated to the said respondents of select large scale organizations. 345 valid responses are considered for further analysis. Researcher has collected responses from Manufacturing, Information technology, Pharmaceutical, Agricultural and Automobile industry. Finding suggest that various factors which are responsible for the overall growth of the organization if they are merged or connected with BA then organizational growth is certain.

Introductions

Due to technological advancement data is increasing in its exponential way and research has proved that systematic analysis of organizational data can elevate the business value. Strategic level managers use this analysis to take strategic decisions and policy building decisions. Businesses have now realized and have started adopting systematic approach towards designing the strategies for implementing business analytics practices.

Company performances maximizes by analyzing and measuring the organizational operational as well as strategic information and taking skillful decisions. Organization can take timely and efficient decisions based on historical and current data available with the organization.

It is very well known that; sustainable practices and decisions led to the overall growth of an organization. Growth in turn led to the profitability which is the ultimate goal of any business organization.

Objective

1. To study the awareness and familiarity of Business analytics amongst the managers.
2. To study the relation of Business analytics on business decisions.
3. To study Impact of Business analytics on organizational growth.

Literature Review

Businesses need to go beyond operational data and MIS reports. Lot many things can be done on consolidated reports and output or analysis can be used as an organizational asset. Data warehousing is a concept in which data is collected, cleaned, stored and then analyzed. Organizations need to adapt this kind of technology to understand the biggest asset of their organization. Copeland, Ron (2001) .

Organizations should work towards increasing the ROI and for that technology like predictive analytics can defiantly help. IDC research in Europe and America based organization shows almost 145% increase in profit. Predictive analytics have helped organizations in ensuring the improvement in business process enhancement and operational level decision making. Henry D. Morris (2003)

SAS had carried out survey on 215 managers to know what the impact of Business analytics on decision is making. In this survey 75% managers were from North America and 25 % from other part of the world. Managers were chosen from various job Profile 20% IT managers and 80% were non-IT managers. Non-IT managers include business consultant, CIO, CTO, CSO, CEO, project managers, VP from banking, manufacturing, insurance, healthcare, pharmaceutical, Telecommunication, Research and development industries. SAS had received was very much positive response on their survey and they concluded that BA has benefited in improving and speeding decision-making process. Along with this other benefit include realizing cost efficiencies, resource alignment with organizational strategies, improved competence, synchronization of various departmental strategies and goals. (SAS (2009)) figure 1.1 shows the list of key benefits organizations have received after implementing BA practices.
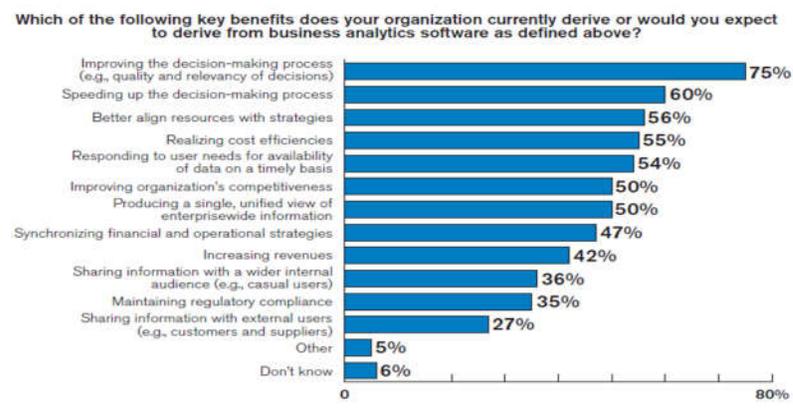

Figure 1.1 Key benefits derived from business analytics software source SAS (2009)

A huge research is going on regarding Business analytics and it is very rarely being discussed that which mechanism is to be followed or used to make decision making process effective with business analytics at organizational level. Cao, Guangming, Duan have identified in their research that business analytics is a step by step approach. In the beginning BA improves and influences information system and then improves decision making overall process. SCao, Guangming1, Duan, Yanqing1 Li, Gendao1(2015)

Study on German companies have been carried out and output showed that non performing companies have not adopted Business analytics practices for their strategic level decision making vs performing companies adopted BA at strategic level decision making Klatt, Tobias (2011).

Threat to business can be reduced and safe and steady stage in businesses can be expected by using Business analytics at right level and in right way Process Engineering (2016) Majority of companies lacking tools, skilled workforce and infrastructure for implementing analytics in their organizations. Business analytics practices should be the priority of organizations and if they fail to implement at this stage then they will not be able to sustain in this competitive world. Forbes .com (2017)
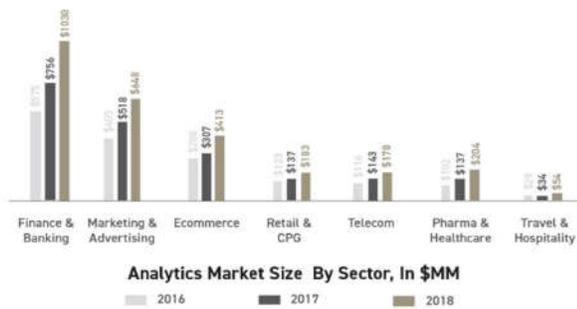

Figure 1.2 Analytics market size sector wise source Analytic India Magazine (2018)

Figure 1.2 shows that almost all the sectors of businesses have started adopting analytics as a game changing tools and finance and banking is showing the highest percentage of usage of analytics.
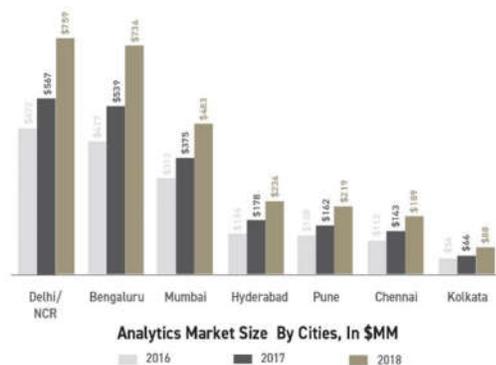

Figure 1.3 Analytics market in various cities of India source Analytic India Magazine (2018)

In India also analytics market is growing, and above graph can show city wise the status of analytics market in India.

Jim Goodnight, CEO of SAS Institute Inc., states that business analytics has a tremendous impact on organizational performance and profitability adding that the "ability to predict future business trends with reasonable accuracy will be one of the crucial competitive advantages of this new decade. And you won't be able to do that without analytics." (2015).

Organizational growth is not dependent on one parameter. It is the combination of various factors and usage of business analytics with these all factors plays a very important role in taking out insights and value out of it. Factors may include extent of usage of technology in the organization, achieving the objectives of organizations, creating opportunities in the organization , using innovative way to solve problems in the organization, aiming at taking comitative advantages over the competitors   and at the end everything just leads to increase in business performance. Patrick Mikalefa ,MariaBourab ,George Lekakosb John Krogstiea(2019)

Research Methodology

Researcher after doing an extensive research based on secondary data in this area identified a gap that no study is carried out in Pune based organizations. So, researcher has carried out study in Pune city and taken responses from the managers who are either decision makers or direct BA users., questionnaire was prepared, Survey was carried out and responses were collected
.
from Senior managers, VP, CEO, CTO, CIO of various different industries which included Pharmaceutical Industry, Information technology industry, Agricultural Industry, Automobile and manufacturing industry. 345 valid responses were considered for analysis. Following is the analysis and interpretation of data collected

Familiarity with Business Analytics –
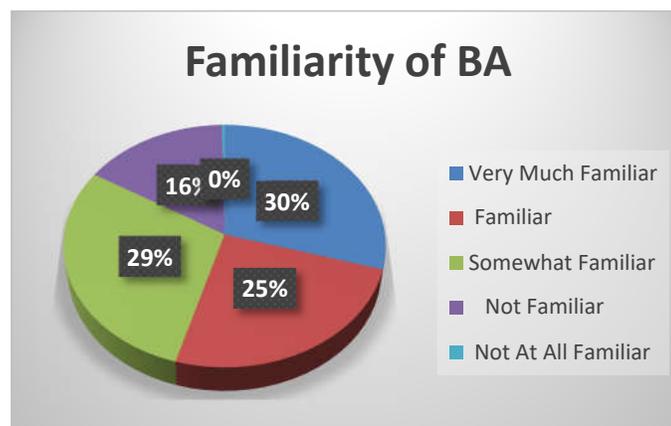
Familiarity with BA

Chart 1.1 Familiarity with BA

Above Chart 1.1 shows that almost 30% of Managers were very much familiar with BA and its practices and 25% and 29% were familiar and somewhat familiar with

BA practices. Which shows that organizations in Pune have started taking the benefits of Business analytics but still almost 30% managers who are not completely sure and not familiar need to understand the importance of BA in terms of organizational performance

Statement	Strongly Agree	Agree	Not Agree/ Not Disagree	Disagree	Strongly Disagree
Management takes account of BA while taking business related decision	75	188	33	36	13
BA effectively used for solving specific issue or problem	27	253	11	38	16
Business Decision reliance on BA	25	252	13	38	17
BA contributes to develop new product/s or service/s in various business operations	24	255	12	38	16
Data shared by BA leads to effective innovation practices	69	218	19	27	12
BA enhanced ability to render data into business value	29	249	11	40	16
BA successfully used to develop future business strategies	32	246	11	40	16

.

Relationship of Business analytics on business decision.

Below given is the data collected for understanding the relationship of Business analytics and decision-making process.

Table 1.1Decision Making and BA
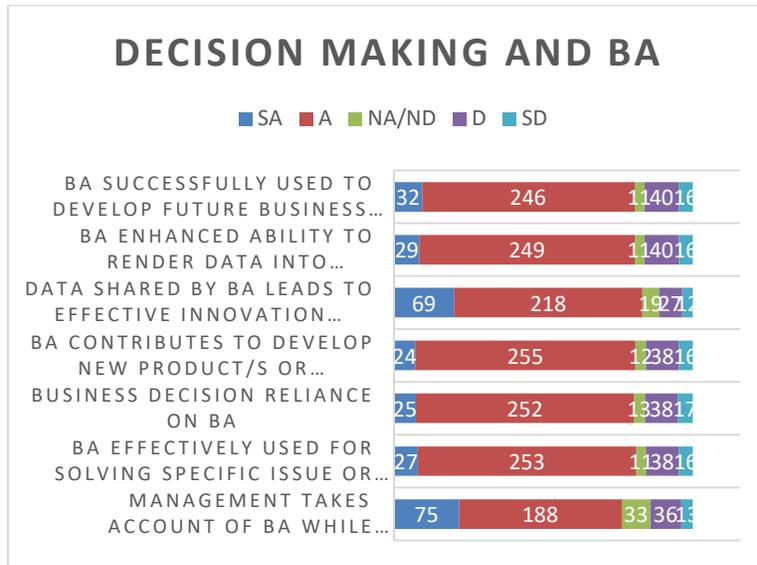
Decision Making and BA

Interpretation: In the case of Decision Making and BA, Management takes account of BA while taking business related decision this notion is strongly agreed by 75 (22%) respondents and agreed by 188 (54%) respondents. 27 (8%) respondents and 253 (73%) respondents respectively strongly agreed and agreed that, BA effectively used for solving specific issue or problem. The next aspect, BA contributes to develop new product/s or service/s in various business operations strongly agreed by 24 (7%) respondents and agreed by 255 (74%) respondents. BA successfully used to develop future business strategies is strongly agreed by 32 (9%) respondents and agreed by 246 (71%) respondents. Thus, it is observed that, Data shared by BA leads to effective innovation practices is one of the chosen options in the case of Decision Making and Business Analytics.

BA and organizational Growth

Statement	Strongly Agree	Agree	Not Agree/ Not Disagree	Disagree	**Strongly Disagree**
The company is gaining more value as it is getting familiar with BA	32	252	11	34	16
BA effectively contributes in achieving organizational objectives	28	253	12	37	15
BA is useful in creating new Business	101	186	37	11	10

opportunities					
BA supports the kind of innovations that leads to strategic advantage and growth of organization	31	251	11	37	15
BA added revival in gaining competitive advantage for the organization	33	248	12	37	15

Table 1.2 BA and organizational growth
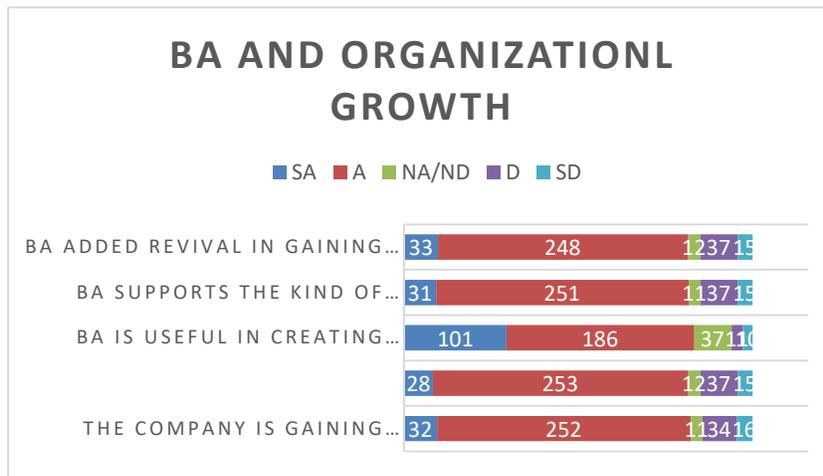
Growth of Organization and BA

Interpretation: The company is gaining more value as it getting familiar with BA is strongly agreed by 32 (9%) of the respondents and 252 (73%) respondents agreed with it. 28 (8%) respondents strongly agreed and 253 (73%) of respondent agreed on fact that BA effectively contributes in achieving organizational objectives. BA is useful in creating new business opportunities is strongly agreed by 101 (29%) respondents and 186 (54%) agreed with it.As per the data 31 (9%) strongly agreed respondents and 251 (73%) agreed respondents, BA supports the kind of innovations that leads to strategic advantage and growth of organization. BA added revival in gaining competitive advantage for the organization is strongly agreed by 33 (10%) respondents followed by 248 (72%) agreed respondents. Thus it is observed that various different factors along with proper usage of Business analytics can enhance organizational performance.

Conclusion

Familiarity and awareness of business analytics tool is increasing. Top management slowly taking the hold on the complete process. Top management have also started adopting systematic strategy and plan to implement the Business analytics practices. Managers are also taking data driven approach for decision making . Organisations are also convinced that Business analytics practices are combinations of different growth factors,

strategies, policies and culture of an organization. After discussion with top management people personally it also has been noted that, many managers are not changing the mindset and because of that they could not take the advantage of analytics to increase the organizational performance. Organizations and managers those who have understood and started taking data driven approach in decision making have shown tremendous growth in their organization and have taken competitive advantages over the others. Growth of organization is mixture of various parameters and if BA is used properly in combination with each of that factor then no one can stop your organisation from growing.

References

- Copeland, Ron(2001) "Next-Wave Business Analytics." Information Week. Issue 858, p51.
- Henry D. Morris (2003)"Predictive Analytics and ROI: Lessons from IDC's Financial Impact Study" IDC, Volume 1.
- Case study v: BT Exact (2004) "intelligent business analytics -- turning data into business benefit. Journal of Database Marketing & Customer Strategy Management." Vol. 12 Issue 1, p73-79.
- Industrial Management & Data Systems. 2009, Vol. 109 Issue 2, p155-172. 18p.
- Hsinchun Chen, Roger H. L. Chiang,Veda C. Storey(2012)
- Oana Velcu-Laitinen ,Ogan M. Yigitbasioglu(2012) "The Use of Dashboards in Performance Management: Evidence from Sales Managers" in journal The International Journal of Digital Accounting Research, vol. 12, pp. 39 – 58
- F. Shafiei , D. Sundaram (2004) "Multi-enterprise collaborative enterprise resource planning and decision support systems" in IEEE Conferences proceedings
- Ishwar Murthy (2006) "Business Analytics in India – Opportunities and Challenges: Discussion" in Journal of IIMB Management Review Vol. 18 Issue 2, p175-191. 17p.
- Davenport, Thomas H (2006) "Competing on Analytics." In Harvard Business Review. Vol. 84 Issue 1, p98-107. 10p
- Reed, David (2007) "Getting intelligent about the Web Data Strategy". Jul/Aug2007, Vol. 3 Issue 8, p16-18. 3p
- SAS (2009) "Defining Business Analytics and Its Impact on Organizational Decision-Making"
- SAS (2011) "The Current State of Business Analytics: Where Do We Go From Here?"
- Klatt, Tobias (2011) "integrating business analytics into strategic planning for better performance" in Journal of Business Strategy. 2011, Vol. 32 Issue 6, p30-39. 10p.
- RanjitBose(2009) "Advanced analytics: opportunities and challenges." In journal "Business intelligence and Analytics: from Big data to big impact." in journal MIS Quarterly Vol. 36 No. 4, pp. 1165-1188

- Cokins, Gary (2012) "Driving Acceptance and Adoption of Business Analytics" in Journal of Corporate Accounting & Finance (Wiley) Vol. 24 Issue 2,p69-74. 6p
- CIOL.com (2013) is India's premier business technology community network. Has published as article

- "SAP brings advanced analytics to a broad spectrum of users."
- CokinsGary(2013). "Driving Acceptance and Adoption of Business Analytics" in journal of 'Journal of Corporate Accounting & Finance (Wiley).', Vol. 24 Issue 2, p69-74.
- Research and Markets (2014) "Business Intelligence & Analytics Market in India 2014"
- Bell, Peter c(2015) "Sustaining an Analytics Advantage" in MIT Sloan Management Review. (Research-based magazine and digital platform for business executives published at the Massachusetts Institute of Technology.)Vol. 56, Issue 3,p21-24
- Research and market (2015) 'Business Analytics Market by Software, by Deployment Type, by End User, by Vertical, and by Geography - Global Forecast to 2019"
- Reportlinker (2015) online news provider of New York published news - "Business Intelligence and Analytics Software Market by Segment, by Services, by Deployment Mode, by Org. Size, by Verticals, by Regions - Global Forecast to 2020"
- Cao, Guangming1, Duan, Yanqing1 Li, Gendao1(2015) "Linking Business Analytics to Decision Making Effectiveness: A Path Model Analysis." In IEEE Transactions on Engineering Management , Volume 62, Issue: 3, p384 - 395
- Process Engineering (2016) "Analytics to 'combat business threats'", Vol. 97, Issue 9, p08-08
- Forbes .com (2017) "Majority of Companies Lack Tools and Investment Necessary for Analytics Usage in Business." p1-1.
- Grace Park, Lawrence Chung, Latifur Khan (2017) "A Modeling Framework for Business Process Reengineering Using Big Data Analytics and A Goal-Orientation" in 11th International Conference on Research Challenges in Information Science
- PC Lai(2017) The literature review of technology adoption models and theories for the novelty technology" in JISTEM - Journal of Information Systems and Technology Management Vol. 14, No. 1, Jan/Apr., 2017 pp. 21-38
- Benjamin T. Hazen, oseph B. Skipper Christopher A. BooneRaymond R. Hill (2018) "Back in business: operations research in support of big data analytics for operations and supply chain management, Annals of Operations Research" Volume 270, Issue 1–2, pp 201–211
- Goodwyn, and George(2019)"Business Analytics" in Armed Forces Comptroller. Winter2019, Vol. 64 Issue 1, p33-34.
- Bunata E.(2014) "Using business Intelligence to manage supply costs". In Healthcare Financial Management, 67(8), 44-47.
- Business Standard Bengaluru (2018) published a study "Indian data analytics industry estimated to be $2.71 bn in revenues: Study
- Analytixlab& Aim (2018) "Analytics and Data science industry in India : Study 2018"
- M. S. Prasada Babu ; S. Hanumanth Sastry(2014) "Big data and predictive analytics in ERP systems for automating decision making process" in IEEE 5th International

Conference on Software Engineering and Service Science

- Cao, Guangming1,Duan, Yanqing1,Li, Gendao1(2015) "Linking Business Analytics to Decision Making Effectiveness: A Path Model Analysis." In IEEE Transactions on Engineering Management, Vol. 62 Issue 3

- Kravet, Steven J (2018) Bailey, Jennifer published an article "Deriving Value from Data and Dashboards." in journal Fast Practice. 2018, Vol. 12 Issue 5, p2-3.

- Alper Sarikaya, Michael Correll, Lyn Bartram, Melanie Tory, and Danyel Fisher (2019) " What Do We Talk About When We Talk About Dashboards? Published in journal IEEE Transactions on Visualization and Computer Graphics ,Volume: 25 , Issue: 1 , P682 – 692

- Mintu-Wimsatt, Alma (2018) "Business Analytics in the Marketing Curriculum: A Call for Integration" in Marketing Education Review. Spring2018, Vol. 28 Issue 1, p1-5.

- Holsapple, Sena,Wagner, William3(2019) has published an article "The perceived success of ERP systems for decision support." In journal Information Technology & Management. Vol. 20 Issue 1, p1-7. 7p.

- Economic Times newspaper (2019) titled "Advanced analytics talent growing fastest in India: Bain"